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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,719	07/13/2001	Jacques Joseph Henri Orban	14,0125	4028

7590 01/28/2004

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EXAMINER
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GUTIERREZ, ANTHONY

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/807,719

Applicant(s)

ORBAN ET AL.

Examiner

Anthony Gutierrez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 46-88 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 48, 49, 51, 52, 60-62, 64, 68, 71, 72 and 80-82 is/are rejected.
- 7) ☒ Claim(s) 2, 46, 47, 50, 53-59, 63, 65-67, 69, 70, 72-79 and 83-88 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because it contains a grammatical error. Line 6 recites the phrase "The invention also involves and apparatus...".

Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,48,49,51,64,68, and 71, are rejected under 35 U.S.C. 102(b) as being anticipated by Owen et al. (US Patent 4,409,899).

As to claims 1 and 64, Owen et al. discloses (see Fig 1.) placing a positioning device in a particular location (element 10, where the detected aircraft is considered by the Examiner to be a positioning device since the target range  $R_t$  is determined based on the position of the aircraft); placing a seismic sensor near said positioning device (element 11); and determining the distance between said seismic sensor and said positioning device using an airborne acoustic transmission between said positioning device and said seismic sensor (the phrase "Target Range,  $R_t$ " and the phrase " Airborne Sound Waves" and columns 3-5).

As to claims 48 and 68, Owen et al. further discloses wherein said airborne acoustic transmission is a spread spectrum acoustic signal (col. 3, lines 29-32).

As to claim 49, Owen et al. further discloses wherein said airborne acoustic transmission is a pulse, frequency sweep, or digitally encoded sweep acoustic signal (col. 3, lines 29-32).

As to claims 51 and 71, Owen et al. further discloses including a temperature sensor for measuring temperature of the air near said seismic sensor or positioning device (col. 1, lines 40-44).

4. Claims 60-62 and 80-82 are rejected under 35 U.S.C. 102(b) as being anticipated by Michel (US Patent 4,811,308).

As to claims 60 and 80, Michel discloses placing a positioning device in a particular location (col. 3, lines 18-33 and 62-65), where the Examiner considers the stealth aircraft to be the positioning device since it is detected based on its location; placing a seismic sensor near said positioning device (col. 3, lines 44-50); and determining the distance between said seismic sensor and said positioning device using an airborne acoustic transmission between said positioning device and said seismic sensor (col. 3, lines 62-65), wherein said seismic sensor is a first sensor and further including additional seismic sensors and the step of determining the distance between said additional seismic sensors and said positioning device using airborne acoustic transmissions between said positioning device and said additional seismic sensors (col. 3, lines 44-col. 4, line 3) where the location of the stealth aircraft is determined based on triangulation of at least three sub-arrays of multiple seismic sensors.

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As to claims 61 and 81, Michel further discloses calculating a group center of gravity for said first seismic sensor and said additional seismic sensors (col. 3, lines 62-65).

As to claims 62 and 82, Michel further discloses determining whether said first seismic sensor and said additional seismic sensors have been laid out in a prescribed order (col. 3, lines 48-50).

5. Claims 52 and 72 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton (US Patent 3,547,218).

As to claims 52 and 72, Hamilton discloses (see Fig. 1) placing a positioning device in a particular location (element 11, which the Examiner considers to be a positioning device because it possesses the rotor blades that make the noise that serve as the seismic impulse source, and the helicopter has to be placed at a particular position to be near the sensor involved in the survey); placing a seismic sensor near said positioning device (16 and 17); and determining the distance between said seismic sensor and said positioning device using an airborne acoustic transmission between said positioning device and said seismic sensor wherein said positioning device is placed near a survey flag (col. 2, line 60- col. 3, line 14), where the helicopter (positioning device) is positioned above the survey flag at a known distance from the sensors (col. 3, lines 4-7) and where knowledge of the velocity of sound in the air and the subsurface (as determined by the survey) would provide the distance between the sensor and the positioning device.

***Allowabl Subject Matt r***

6. Claims 2,46,47,50,53-59,63,65-67,69,70,72-79 and 83-88 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1,48,49,51,52,60-62,64,68,71,72, and 80-82 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 4,630,246 to Fogler discloses an apparatus for detecting aircraft using a processing system that correlates signals received by a microphone and a geophone.

US Patent 5,161,127 to Grosch discloses a geophone-microphone sensor arrangement for determining the range of sound-generating vehicles.

US Patent 4,775,028 to de Heering discloses a system for determining depth in Arctic waters using an airborne microphone suspended by a helicopter.

US Patent 5,128,904 to Chambers discloses a method applicable in a land zone for determining the separation of an acoustic source and an acoustic sensor that makes use of a range statistic determined from a signature of the first arriving energy traveling along a direct path from the source to the sensor.

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US Patent 4,890,264 to Crews et al. discloses a seismic exploration method using geophones and microphones wherein the microphones are used to detect wind and mechanical noise so that non-uniformly distributed noise signals may be accurately eliminated.

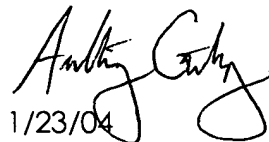
US Patent 6,381,544 to Sallas et al. discloses a speaker-microphone system in conjunction with geophones to filter out airborne noise produced by a surface seismic source.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Gutierrez whose telephone number is (703) 305-1973. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (703) 308-1677. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0976.

Anthony Gutierrez



1/23/04



MARC S. HOFF  
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